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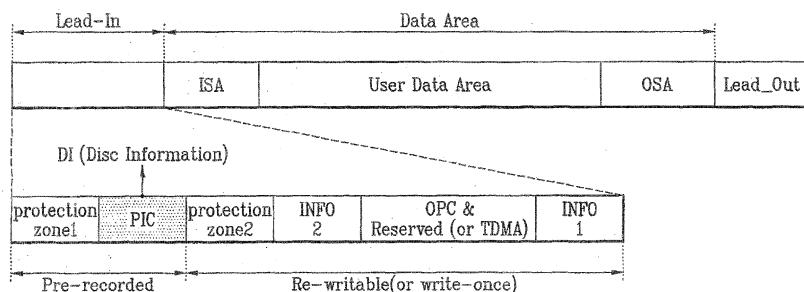
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(54) **Recording medium, method of configuring control information thereof, recording and reproducing method using the same, and apparatus thereof**

(57) The Invention relates to a recording medium having data structure of a control information with at least one recording layer. The control information includes at least two information units for lower writing speed and higher writing speed. The first information unit for lower writing speed includes write strategy parameters for first write strategy type to be used for the lower writing speed. The first write strategy type is one of a plurality of write strategy types applicable to the lower writing speed, and mandatory type to be used necessarily for at least the lower writing speed or a preferred type determined based

on a preference among the plurality of write strategy types applicable to the lower writing speed. The second information unit for higher writing speed includes write strategy parameters for a write strategy to be used for the higher writing speed. The write strategy type for the higher writing speed is the same as the first strategy type or a write strategy type different than the first write strategy type, and mandatory type to be used necessarily for at least the higher writing speed or a preferred type determined based on a preference among the plurality of write strategy types applicable to the higher writing speed.

FIG. 1



- ISA : Inner Spare Area
- OSA : Outer Spare Area
- PIC : Permanent Information & Control data
- TDMA : Temporary Defect Management Area



European Patent
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PARTIAL EUROPEAN SEARCH REPORT

Application Number

which under Rule 45 of the European Patent Convention EP 06 12 4334
shall be considered, for the purposes of subsequent
proceedings, as the European search report

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (IPC)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
Y	EP 1 331 631 A1 (MATSUSHITA ELECTRIC IND CO LTD [JP]) 30 July 2003 (2003-07-30) * paragraph [0055]; figure 2 * -----	2-4, 13-16, 20-23, 29-31	INV. G11B7/0045 G11B7/007 G11B20/12
X	US 6 480 450 B1 (FUJII TORU [JP] ET AL) 12 November 2002 (2002-11-12)	1,12,19, 26,28,32	
Y	* column 3, line 17 - column 4, line 14 *	2-4, 13-16, 20-23, 29-31	
X	----- WO 02/089123 A (MATSUSHITA ELECTRIC IND CO LTD [JP]; TASAKA SHUICHI [JP]; SHOJI MAMORU) 7 November 2002 (2002-11-07) * the whole document * & US 2003/151994 A1 (TASAKA SHUICHI [JP] ET AL) 14 August 2003 (2003-08-14) * paragraphs [0273] - [0294] * ----- -/-	1,12,19, 26,28,32	TECHNICAL FIELDS SEARCHED (IPC)
			G11B
INCOMPLETE SEARCH			
The Search Division considers that the present application, or one or more of its claims, does/do not comply with the EPC to such an extent that a meaningful search into the state of the art cannot be carried out, or can only be carried out partially, for these claims.			
Claims searched completely :			
Claims searched incompletely :			
Claims not searched :			
Reason for the limitation of the search:			
see sheet C			
7	Place of search	Date of completion of the search	Examiner
	Munich	25 May 2007	Stemmer, Michael
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			
T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			



DOCUMENTS CONSIDERED TO BE RELEVANT		CLASSIFICATION OF THE APPLICATION (IPC)
Category	Citation of document with indication, where appropriate, of relevant passages	
P,X	<p>WO 03/105139 A1 (LG ELECTRONICS INC [KR]; KIM JIN YONG [KR]; SUH SANG WOON [KR]) 18 December 2003 (2003-12-18) * page 5, line 4 - page 6, line 11; figure 5 *</p> <p>-----</p>	1,12,19, 26,28,32
TECHNICAL FIELDS SEARCHED (IPC)		



Claim(s) searched completely:
1-4,12-16,19-23,26,28-32

Claim(s) not searched:
5-11,17,18,24,25,27

Reason for the limitation of the search:

1. The term "is followed" in claim 5 is ambiguous.
This applies mutatis mutandis to claim 17, 18, 24, 25.
2. In claim 6 it is not clear how it can be determined from the data structure per se that "the first type write strategy is an optional or alternative type to use optionally or alternatively for at least a higher writing speed".
It is not clear how it can be recognized from the recording medium per se that a "write strategy is an optional or alternative type".
This applies mutatis mutandis to claim 7-11.
3. Claim 27 is obscure.

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 06 12 4334

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

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